Final Year B. Tech., Sem VI 2021-22

High Performance Computing Lab

Assignment submission

PRN No: 2019BTECS00069

Full name: Vaishnavi Vilas Disale

Batch: B3

Assignment: 1

Q1.Hello World Program:

```cpp
#include<omp.h>
#include<bits/stdc++.h>
int main(){

    #pragma omp parallel
    {
        printf("Hello World from process: %d\n", omp_get_thread_num());
    }
    return 0;
}
```

Output:

```
D:\academics\HPC Lab\ASSIGNMENT1\hello_world_ll.exe

HHello World from process: 3
Hello World from process: 1
Hello World froHello World from pHello WorldrocHem p fresslloHelello om : 4 Wolo rocWorld
esspro fromces: 6
s: 7
Worrld from pro proccessld : 2fro
essm pr: 0oce
ss: 5

--------------------------------
Process exited after 3.52 seconds with return value 0
Press any key to continue . . .
```

Q2. To add squares of numbers Program:

hello_world_ll.cpp | Squares_l.cpp

```cpp
#include<omp.h>
#include<bits/stdc++.h>
int main(){
    int sum=0;
    #pragma omp parallel for
    for(int i=1; i<=10;i++)
    {
        printf("thread No. %d Number : %d Square : %d\n", omp_get_thread_num(), i, i * i);
        sum+=i*i;
        printf("Sum is %d \n",sum);
    }
    printf("%d",sum);
    return 0;

}
```

Output:

```
D:\academics\HPC Lab\ASSIGNMENT1\Squares_l.exe

thread No. 0 Number : 1 Square : 1
thread No. 7 Number : 10 Square : 100
thread No. 5 threathretthreSum is d Nad NNumbad NSuthreo. 4 m er : ad Numo. 1
thrber2 Nis hreo. 8 SNo.ead : umb101ad 6 Nqua 1  No7 Ser
No.umbre Number quaer . 0: 3 Square : 9: 64
re : : 5 Sq 3 Nu Nuuare mbember : 25
49
Sum is r : SSum is um: 9 Sq1906 Square : 36
Sum is 275
: 2 Sq239

uare : 81
Sum is 356
uar is 165

Sum is 365
thread e No. 1 Numb: er : 4 Sq4
Suuare : 16
Sum is 385
m is 369
385
---------------------------------
Process exited after 1.331 seconds with return value 0
Press any key to continue . . .
```

GITHUB LINK: https://github.com/vai69/HPC-LAB